

What is claimed is:

1. A method of producing heat-expanded microspheres, which comprises the steps of:
feeding a gas fluid containing heat-expandable microspheres through a gas-introducing tube having a dispersion nozzle on its outlet and fixed inside a hot gas flow, and then jetting the gas flow from the dispersion nozzle, wherein each of the heat-expandable microspheres comprises a shell of thermoplastic resin, and a blowing agent encapsulated therein having a boiling point not higher than the softening point of the thermoplastic resin, and have an average particle size from 1 to 100 μm ;
colliding the gas fluid with a collision plate fixed on a downstream portion of the dispersion nozzle in order to disperse the heat-expandable microspheres in the hot gas flow; and
heating the dispersed heat-expandable microspheres in the hot gas flow at a temperature not lower than their expansion initiating temperature and thus expanding the heat-expandable microspheres.
2. A method of producing heat-expanded microspheres according to Claim 1, wherein the gas-introducing tube and/or collision plate is comprised of an overheating prevention function.
3. A method of producing heat-expanded microspheres, comprising the steps of:
jetting a gas fluid containing heat-expandable microspheres through at least one dispersion nozzle fixed outside a hot gas flow, and dispersing the gas fluid in the hot gas flow, wherein each of the heat-expandable microspheres comprises a shell of thermoplastic resin, and a blowing agent encapsulated therein having a boiling point not higher than the softening point of the thermoplastic resin, and have an average particle size from 1 to 100 μm ; and
heating the dispersed heat-expandable microspheres in the hot gas flow at a temperature not lower than their expansion initiating temperature to thereby expand the heat-expandable microspheres.
4. A method of producing heat-expanded microspheres according to any one of Claims 1 to 3, wherein each of the heat-expandable microspheres further comprises a particulate filler that adheres to the outer surface of the shell thereof, the particulate filler having an average particle size not greater than one tenth of the average particle size of the heat-expandable microspheres without the particulate filler adhered to the surface thereof.
5. A method of producing heat-expanded microspheres according to any one of Claims 1 to 4, which further comprises the step of wetting the resultant heat-expanded microspheres with a liquid organic compound which does not dissolve the shells of the heat-expanded microspheres.